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BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

EXAMINER

OPSASNICK, MICHAEL N

ART UNIT

PAPER NUMBER

2655

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,579	WANG, YE	
	Examiner	Art Unit	
	Michael N. Opsasnick	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/05; 11/12/04; 10/1/00; 9/16/01; 5/1/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of the handwritten numbering in drawings 1-4,7,8,10-13. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 13 and the corresponding subblock are not mentioned in the detailed description of the specification.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1,3-9,12,14-16,19,20 are objected to because of the following informalities:

As per claims 1,20, the phrase "at least one" is open ended as to how many intervals. Examiner recommends pluralizing interval. Appropriate correction is required.

As per claim(s):

3-6,8,14-16,19, the phrase "the step";

7, the phrase "the group";

9, the phrase "the receiver";

12, the phrase "the sequence";

lack antecedent basis. Examiner notes that the word “the” is clearly further limiting or modifying and should be “a” instead of “the”. (for example the phrase “the step” should read “a step”,etc.).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 12, the phrase “replacing said identified defective decoded audio data interval with one of said sequence of decoded audio data intervals not having a short transient signal to form a replacement decoded audio data interval if said identified audio data interval was not identified as said defective decoded audio data interval” is vague and indefinite because it contains a circular limitation that cancels a previous determination (the determination of defectiveness). In other words, how can the replacing of the defective audio interval occur if the defective audio interval was not identified as defective in the first place ? For the purposes of prior art related examining with respect to claim 12, the examiner will ignore the phrase “if said identified defective audio data interval was not identified as said defective decoded audio data interval”.

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As per claim 12, the first occurrence of the term "at least a portion" is a relative term which renders the claim indefinite. The term "at least a portion" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Furthermore, the specification points to a "portion" as either containing both defective and non-defective audio data, or alternatively, wholly contained defective audio data or wholly contained replacement audio data. For the purposes of prior art related examining with respect to claim 12, examiner will ignore the first occurrence of the term "at least a portion of".

Claims 13-19 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because 1) claims 13-19 depend from claim 12 that has been determined to be vague and indefinite under 35 U.S.C. 112 second paragraph, and 2) the claim limitations of claims 13-19 do not cure the deficiencies of claim 12 with respect to vague and indefiniteness. For the purposes of prior art related examining with respect to claims 13-19, the examiner will follow the claim scope interpretation of claim 12 as noted above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-11,20 are rejected under 35 U.S.C. 102(b) as being anticipated by Davidson (5394473).

As per claim 1, Davidson (5394473) teaches:

“a method for transmitting a stream of audio data from an audio source to a receiver for decoding, said method comprising the steps of” audio encoder/decoder system (col. 9 lines 45-53) with audio signal input (Fig. 1a, subblock 102) for transmission; Fig. 1a, subblock 122; col. 15 lines 55-60);

“formatting the stream of audio data provided by the audio source into a sequence of audio data intervals” as formatter (col. 15 lines 50-57) assembling the transform coefficients of the audio signal for storage/transmission (col. 15 lines 55-58);

“transform encoding said sequence of audio data intervals to form a sequence of encoded audio data intervals, each said encoded audio data intervals having a plurality of transform coefficients” as transform coefficients (col. 15 lines 52-54) generated for a series of transform blocks representing the time domain signal (col. 20 lines 1-21);

“analyzing said sequence of encoded audio data intervals to identify at least one encoded transient audio data interval, said encoded transient audio data interval including a short transient signal having first transient signal characteristics” as analyzing transient signals on a short term basis (col. 22 lines 4-20);

“and embedding ancillary data into a said encoded audio data interval preceding said encoded transient audio data interval, said ancillary data providing notification that

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said encoded transient audio data interval includes said short transient signal” as providing an error detection correction codes to the formatter” (col. 32 lines 58-64). (Davidson not only enters correction codes into the data stream (i.e., the error codes represent ancillary data), but the length of the transform block tell the decoder that the current data interval includes a short transient signal (col. 11 liens 33-48) – shorter block lengths are used for transients and maximum block lengths signify no transients).

As per claim 2, Davidson (5394473) teaches:

“wherein said audio data intervals are formatted as pulse code modulation data” as the use of PCM data as a choice for the transform (col. 8 lines 30-40). Examiner notes that Davidson’s preferred coder is a transform coder (col. 15 line 35 – col. 16 line 10), however, Davidson shows that not one type of signal-independent coding which provides maximum coding gain (col. 8 lines 45-50), and that PCM is a design choice (col. 8 lines 37-40).

As per claim 3, Davidson (5394473) teaches:

“ wherein said step of transform encoding comprises the step of applying a modified discrete cosine transform to said sequence of audio data intervals” as performing modified DCT (Fig. 26 e).

As per claim 4, Davidson (5394473) teaches:

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“wherein said step of transform encoding comprises the step of applying a shifted discrete Fourier transform to said sequence of audio data intervals” as applying a shift in the block length of the sampling block while performing a DST; the shift in block length is equivalent to a shifted discrete Fourier transform ~ a shift in block length is a shift in the actual number k of $S(k)$ (col. 20 lines 23-46; referring back to col. 19 lines 40-56).

As per claim 5, Davidson (5394473) teaches:

“wherein said step of analyzing comprises the step of performing a frequency analysis on said transform coefficients to detect a short transient signal” as short term block transform coefficients (col. 22 lines 8-35; col. 24 lines 30-35).

As per claim 6, Davidson (5394473) teaches:

“wherein said step of performing a frequency analysis comprises the step of extracting a feature value from said transform coefficients” as the feature value is the peak of the signal (col. 23 lines 50-55).

As per claim 7, Davidson (5394473) teaches:

“wherein said feature vector comprises a member of the group consisting of a primitive band energy value, an element-to-mean ratio of band energy, and a differential band energy value” as calculating the power-spectral density energy measure (col. 43 lines 50-62). Davidson (5394473) suggests an alternate embodiment of measuring power spectral densities to determine required frequency resolution. A power spectral density,

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by definition, measures the average power of a signal over a frequency range (or in other words) power equates to energy and frequency range equates to band-range.

As per claim 8, Davidson (5394473) teaches:

“wherein said step of performing a frequency analysis comprises the step of applying a shifted discrete Fourier transform” as applying a shift in the block length of the sampling block while performing a DST; the shift in block length is equivalent to a shifted discrete Fourier transform ~ a shift in block length is a shift in the actual number k of $S(k)$ (col. 20 lines 23-46; referring back to col. 19 lines 40-56).

As per claim 9, Davidson (5394473) teaches:

“sending said encoded audio data interval having said ancillary information to the receiver; and subsequently sending said encoded transient audio data interval to the receiver” as sending the signal to the decoder and the de-formatter (Fig. 1b).

As per claim 10, Davidson (5394473) teaches:

“wherein said short transient signal comprises a drumbeat” as the signal content that Davidson (5394473) addresses can be a music signal (col. 22 lines 18-20). It is well known in the art of audio and music that music includes drumbeats.

As per claim 11, Davidson (5394473) teaches:

“the step of analyzing said sequence of encoded audio data intervals to identify a second encoded transient audio data interval, said second encoded transient audio data interval including a second short transient signal having second transient signal characteristics.” As a 2nd transform block (col. 23, lines 13-30).

As per claim 20, Davidson (5394473) teaches:

“A device for transmitting streaming audio information, said device comprising” as audio signal input (Fig. 1a, subblock 102) for transmission; Fig. 1a, subblock 122; col. 15 lines 55-60);

“an encoder for formatting the audio information into a sequence of audio data intervals and for transform encoding said sequence of audio data intervals to form a sequence of coded audio data intervals” as a formatter (col. 15 lines 50-57) and as transform coefficients (col. 15 lines 52-54);

“and a transient detector for identifying at least one said coded audio data interval having a short transient signal as a transient coded audio data interval” as analyzing transient signals on a short term basis (col. 22 lines 4-20).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 12-18,21,22 are rejected under 35 U.S.C. 102(e) as being anticipated by Cooke (6597961).

As per claim 12, Cooke (6597961) teaches:

“A method for decoding a sequence of transform-encoded audio data intervals to produce an audio sample, said method comprising the steps of: inverse transform decoding the sequence of transform-encoded audio data intervals to yield a sequence of decoded audio data intervals having a plurality of transform coefficients” as receiving encoded audio data at the decoder and unpacking the information, including transform coefficients (col. 4 lines 20-25);

“retrieving ancillary data from said sequence of decoded audio data intervals, said ancillary data for identifying a said decoded audio data interval having a short transient signal as a transient decoded audio data interval” as in the unpacking of the audio data, a set transient flag occurring in the audio data is sent to the frame synthesizer (col. 5 lines 16-26);

“identifying a defective decoded audio data interval in said sequence of decoded audio data intervals” as detecting when a frame of audio data is bad or missing (col. 3 lines 49-54);

“replacing said identified defective decoded audio data interval with one of said sequence of decoded audio data intervals not having a short transient signal to form a replacement decoded audio data interval if said identified defective audio data interval was not identified as said defective decoded audio data interval” as replacing the lost audio frame with a frame of synthesized data (col. 8 lines 5-10), wherein a transient condition is determined in the previous frame; when the previous frame includes a transient, the lost frame is replaced by an interpolation of the next frame, and when the previous frame does not include a transient, the lost

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frame if replaced by an interpolation of that particular previous frame (Fig. 9, subblocks 914, 916, and 918);

“and replacing at least a portion of said identified defective decoded audio data interval with at least a portion of one of said sequence of decoded audio data intervals having a short transient signal form a replacement decoded transient audio data interval if said identified defective audio data interval was identified as a said defective decoded audio data interval” as replacing the lost audio frame with an interpolated frame data, said interpolation between the previous and next frame, when both of these frames contain transient signals (Fig. 9, subblock 912 to subblock 906).

As per claim 13, Cooke (6597961) teaches:

“wherein said defective decoded audio data interval comprises one of a corrupted decoded audio data interval and a missing decoded audio data interval” as detecting both error and lost audio data frames (col. 3 lines 49-54).

As per claim 14, Cooke (6597961) teaches:

“wherein said step of replacing said defective decoded audio data interval comprises the step of substituting a sequentially-previous decoded audio data interval for said defective decoded audio data interval” as using the previous frame data for interpolation (Fig. 9, subblock 914 to subblock 918).

As per claim 15, Cooke (6597961) teaches:

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“wherein said step of replacing said defective decoded audio data interval comprises the step of substituting a transient decoded audio data interval for said defective decoded audio data interval” as using an interpolation between two transient frames (and therefore, the interpolated frame will be transient since the data is derived from an interpolation of two frames containing transient data) – Fig. 9, the path from subblock 912 directly to subblock 906).

As per claim 16, Cooke (6597961) teaches:

“wherein said step of replacing said defective decoded audio data interval comprises the step of substituting a composition audio data interval for said defective decoded audio data interval, said composition audio data interval including at least a portion of a previous decoded audio data interval and at least a portion of a transient decoded audio data interval” as using an interpolation between two transient frames (and therefore, the interpolated frame will contain data from the previous frame and also transient data derived from the second frame) – Fig. 9, the path from subblock 912 directly to subblock 906).

As per claim 17, Cooke (6597961) teaches:

“the steps of: converting said decoded audio data intervals not identified as defective to formatted audio samples; and converting said replacement audio data intervals to formatted audio samples” as frame synthesizer generating audio based upon the non-defective plus replacement audio samples (col. 8 lines 45-51).

As per claim 18, Cooke (6597961) teaches:

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“wherein said formatted audio samples are pulse code modulation formatted” as PCM formatted audio data (col. 4 lines 36-41).

As per claim 19, Cooke (6597961) teaches:

“wherein said step of replacing at least a portion of said identified defective decoded audio data interval comprises the step of matching the window type of said replacement decoded audio data interval with the window type of said identified defective decoded audio data interval” as matching the bit field with a predetermined value associated with the transform that was used during the encoding process (col. 5 lines 60-64; that is, the bit field pattern contains information as to which transform was used, and the corresponding transform is executed on the decoding end).

As per claim 21, Cooke (6597961) teaches:

“a device for concealing errors in a sequence of encoded audio data intervals, said device comprising: a decoder for decoding said sequence of encoded audio data intervals to yield a sequence of decoded audio data intervals, said decoder also for identifying a defective said decoded audio data interval in said sequence of decoded audio data intervals, said decoder further for retrieving ancillary data from said sequence of decoded audio data intervals, said ancillary data for indicating which said decoded audio data interval includes a transient signal” as receiving encoded audio data at the decoder and unpacking the information, including transform coefficients (col. 4 lines 20-25) and as in the unpacking of the audio data, a set transient flag occurring in the audio data is sent to the frame synthesizer (col. 5 lines 16-26);

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“and an error concealment unit for replacing said defective decoded audio data interval with a non-defective decoded audio data interval including a transient signal if said defective decoded audio data interval originally included a transient signal” as replacing the lost audio frame with an interpolated frame data, said interpolation between the previous and next frame, when both of these frames contain transient signals (Fig. 9, subblock 912 to subblock 906); wherein the original error can be measure as a transient as well (col. 7 lines 30-36; the “sudden onset” artifact that is not present in the original audio signal, as stated, is construed to be an error).

As per claim 22, Cooke (6597961) teaches:

“further comprising a buffer for storing said non-defective decoded audio data interval including a transient signal” as frame buffer storing the previous, current, and next frame (col. 4 lines 49-55), of which the buffer can contain transients that are considered non-defective (Fig. 9, subblock 912 to subblock 906 – the two frames of data, which include transients, are considered to be good enough to be used in interpolation – subblock 906.).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 23,24,28,29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooke (6597961) in view of Davidson (5394473).

As per claim 23, Cooke (6597961) teaches:

“An error concealment system suitable for use in converting audio streaming information into an audio sample, said error concealment system comprising” as audio concealment for streaming audio (col. 1, lines 5-10, col. 1 lines 24-28, and col. 2 lines 17-19);

“and a receiving terminal for converting said sequence of coded audio data intervals into the audio sample, said receiving terminal including an error concealment unit for replacing a defective said transient audio data interval with an error-free transient audio data interval” as receiving audio data (col. 3 lines 10-20; col. 3 lines 49-51), detecting errors (col. 3 lines 52-54), and replacing the defective frame with an interpolated synthetic frame based upon a previous transient signal and a next frame transient signal (Fig. 9, subblock 912 to subblock 906 to subblock 908 to subblock 910).

Cooke (6597961) also teaches a codec device (codec short for coder/decoder) and specifically mentions the use of lapped transform codecs (col. 6 lines 32-34); but Cooke (6597961) is silent on the details of how the coder in a lapped transform coder handles transient signals. Davidson (5394473), however, teaches a lapped transform audio encoder (Davidson (5394473), col. 4 lines 12-16) with a transient detector for classifying a coded audio data interval having a short transient signals (Davidson (5394473), the shorter block lengths are used solely for transients, maximized block lengths signify no transients -- col. 11 lines 33-47; col. 15 lines 40-45, col. 21 line 65 – col. 22 line 20). Therefore, it would have been obvious to one of

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ordinary skill in the art of audio encoding to specify the lapped transform coder as taught by Cooke (6597961) with a lapped transform coder that detects and notes transients via varying block lengths(as taught by Davidson (5394473)) because it would advantageously provide the flexibility to give needed temporal resolution (a characteristic of short block lengths – which are used for transients) and enough frequency resolution (bandwidth; a characteristic of long block lengths – which are used for ‘normal’ audio frames), Davidson (5394473), col. 4 lines 46-63).

As per claim 24, the combination of Cooke (6597961) in view of Davidson (5394473) teaches:

“wherein said receiving terminal further comprises a decoder for decoding said sequence of coded audio data intervals” as decoding the incoming audio data (Cooke (6597961), Fig. 2, subblock 204).

As per claims 28,29, the combination of Cooke (6597961) in view of Davidson (5394473) teaches a communications network connecting said receiving terminal with said audio source (Cooke (6597961), col. 3 lines 35-47, server and computer).

12. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cooke (6597961) in view of Davidson (5394473), as applied to claim 23 above, and further in view of Maggenti et al (6477150).

The combination of Cooke (6597961) in view of Davidson (5394473) teaches using the error concealment system in a wired network, including any communication link (in

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particular, Cooke (6597961), fig. 1, and col. 3 lines 35-47), but does not teach wireless/telecommunication protocols as claimed in claims 25-27. Maggenti et al (6477150), however, teaches the use of an interface from an internet network (fig. 2, subblock 214) to wireless communications (Fig.2, subblocks 202,204, and 206 to 216 to 220; and a PSTN connection – subblock 222,208) transferring audio data (col. 7 lines 45-50). Therefore, it would have been obvious to one of ordinary skill in the art of communication to expand the network as taught by the combination of Cooke (6597961) in view of Davidson (5394473) into wireless devices because it would advantageously provide group communication services to an existing network (Maggenti et al (6477150), col. 1 lines 5-11, col. 2 lines 1-9).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kondo (6141637) teaches multi-variable signal detections.

Vaupel et al (5361278) teaches transient detection in an overlapped codec.

Malvar (6115689) teaches a dual resolution coder.

Hiratsuka et al (5852805) teaches the detection of irregular patterns.

14. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

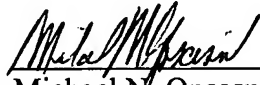
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Mr. David Ometz, can be reached at (571)272-7593. The facsimile phone number for this group is (571)272-7629.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571)272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
5/25/05


Michael N. Opsasnick
Examiner
Art Unit 2655